



**THE STATE OF WISCONSIN  
EMPLOYEE TRUST FUNDS BOARD**



**SECTION 40.65  
DUTY DISABILITY PROGRAM  
ACTUARIAL REVIEW  
AS OF DECEMBER 31, 2001**

**PREPARED BY:**

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## Overview

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The purpose of this report is to summarize our review of the Section 40.65 Duty Disability Plan. Included is a brief review of the Plan's experience during 2001, an estimate of the State's liability as of December 31, 2001 and an analysis of current funding levels.

In preparing this report, we have relied on claim information provided by the Department of Employee Trust Funds. We have not audited this information, but have relied on it as submitted after making reasonableness checks, as we deemed appropriate under the circumstances.

The results of this review indicate that the Duty Disability program has assets of \$112.2 million and estimated liabilities of \$318.3 million as of December 31, 2000. The accrued funding shortfall is \$206.1 million, which represents about 23% of the \$914.6 million in covered payroll.

The remainder of this report summarizes the review in more detail. A number of assumptions have been made in estimating the State's liability, which are described throughout the report and summarized in Exhibit 2.

## 2001 Experience Review

### Fund Balance

During 2001 the fund balance increased from \$87,072,547 to \$112,171,824; Investment earnings were \$4,525,539 with paid claims and administrative expenses totaling \$20,148,623. These components are shown in the following table along with figures for the prior years for comparison purposes.

Year	Contributions	Benefits		Admin Charge	Interest Credit (Charge)	Ending Balance	Average Contribution Rate
		Benefits Annual \$	% Increase				
1984	\$	\$	-%	\$	\$	\$57,193	-%
1985	633,501	1,343,755	-	0	(160,822)	(813,893)	0.2
1986	1,259,167	2,474,345	84	0	(417,606)	(2,446,677)	0.4
1987	1,739,234	3,262,157	32	0	(416,385)	(4,385,985)	0.5
1988	3,939,946	4,662,629	43	348,018#	(486,800)	(5,943,496)	1.1
1989	5,257,471	5,906,152	27	144,629	(1,121,646)	(7,858,452)	1.4
1990	9,125,470*	7,178,185	22	75,481	(701,016)	(6,687,664)	2.1
1991	10,653,019	8,188,603	14	130,203	(773,655)	(5,127,106)	2.3
1992	12,244,608	9,288,487	13	120,462	(476,392)	(2,767,839)	2.5
1993	14,410,852	10,392,896	12	160,981	(105,814)	983,322	2.8
1994	16,242,342*	11,786,839	13	161,127	219,777	5,524,539	3.0
1995	19,738,999*	12,748,266	8	183,922	1,007,019	13,322,102	3.4
1996	20,670,838*	13,527,755	6	355,847	2,087,053	22,196,391	3.3
1997	21,924,843*	14,432,206	7	119,017	3,060,768	32,630,779	3.3
1998	26,205,796	15,484,812	7	235,334	4,795,610	47,912,039	3.66
1999	26,585,142	16,802,277	9	612,691	7,020,204	66,102,416	3.88
2000	32,188,231	18,337,714	9	153,551	7,273,165	87,072,547	3.88
2001	35,120,406	19,857,704	8	290,919	10,127,493**	112,171,824	3.88

\* Includes adjustment to beginning balance.

\*\* Includes a \$5,601,954 adjustment for 1999 Wisconsin Act 11.

# Includes 3 1/2 years of administrative expense charges.

As of December 31, 2001 there were 771 claims in payment status with annual benefits totaling \$21,364,128. 737 of the claims were for disabled participants and 34 were for beneficiaries. The number of claims and benefits being paid increased over last year from 745 and \$19,341,948 respectively. The following table shows annual benefits as a dollar amount and as a percentage of payroll by recipient type.

	Claims in Payment Status		
	No.	Annual \$	% of Payroll
Disabled Participants	737	\$20,855,352	2.28%
Survivor Beneficiaries	34	508,776	.06
<b>Total</b>	<b>771</b>	<b>\$21,364,128</b>	<b>2.34%</b>

## **Estimated Liability as of December 31, 2001**

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The liability for outstanding claims under the Duty Disability program was estimated in two parts - reported claims and incurred claims not yet in pay status. The following paragraphs summarize the methods used and results.

### **Claims in Pay Status**

The total liability for claims with a pay status of \$286.0 million is 9.25% higher than the liability as of 12/31/00. The \$24.2 million increase is the result of changes in the number and characteristics of the claims.

### **Incurred Claims Not Yet in Pay Status**

A review of recent claims data showed lags in the time between when claims are incurred and when they are reported and reach pay status. 53 claims, which are likely to be approved for pay status, were in either pending or appeal status as of 12/31/01. This includes 5 claims for which applications were received during the first two months of 2002. The plan was changed during 1998 so that its liability begins on the later of the date the employee becomes disabled or the application is received. The application must be completed within one year from date of receipt. Previously there was no time limit. It is important to note that while this changes the date after which the plan liability begins to increase, it does not change the date upon which an actuary considers the claim to be incurred. Hence, if disability occurs in late 2001, but an application for benefits is not filed until early in 2002, the claim is still considered to be incurred at the end of 2001. The IBNR portion of the liability would reflect that benefits were not payable until the application is received.

The IBNR liability for 12/31/01 of \$32.3 million was developed using this group of claims that are currently either in appeal or pending status, average reserve factors, and a small load for conservatism.

## Results

The total estimated liability as of December 31, 2001 for the Duty Disability program is \$318,274,758 developed as follows:

	Offsets	Annual \$
Annual Benefits Before Offsets		\$33,372,854
Offsets		
Social Security	\$1,968,204	
Unemployment Compensation	52,694	
Worker's Compensation	571,714	
WRS Benefits		
- Separation	908,040	
- Disability	4,435,944	
- Normal Retirement	4,231,756	
Earnings	355,592	
Total Offsets	\$12,523,944	
Adjustment for offsets greater than base benefit	\$515,218	
Net Offsets	\$12,008,726	
Annual benefits after offsets		\$21,364,128
Present value of benefits being paid		\$286,021,758
Reserve for incurred but not paid claims		\$32,253,000
<b>Total</b>		<b>\$318,274,758</b>

***Total net offsets are 36% of gross benefits before offsets***

## Analysis of Funding Levels

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### Financial Progress

As of December 31, 2001 the payout rate from this program increased to 2.20% of covered payroll (up from 2.16% a year ago). Pertinent elements of the present financial picture include:

- During 2001 benefit reserves increased from \$87.1 million to \$112.2 million.
- The contribution rate currently in effect (December 31, 2001) will generate approximately 3.88% of covered payroll. This rate appears to be sufficient to achieve a fully reserved status over a 21-year period (down from 22 years at 12/31/00). These calculations assume that the group size stabilizes at about its current level, as follows:

Provision for annual incurred claims*	2.20%
Amortization of accrued shortfall	<u>1.68%</u>
<b>Total</b>	<b>3.88%</b>

\* Includes (Benefit Payments + Expenses) as a % of covered payroll

Current funding policy recommends limiting the amortization period to approximately 30 years. The data above verifies that the current rate schedule is projected to do this for another year. In 1998 the Board approved a rate increase of approximately .22% of payroll. At that time, we expected the increase to be sufficient to meet the funding policy for two years. After three years, it still appears that the new contribution level is sufficient for at least one more year. Therefore, we do not recommend a contribution increase at this time.

## Exhibit I

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Section 40.65 duty disability benefits for protective occupation participants were added in 1982. Benefits are summarized below:

***Eligibility.*** Duty-related injury or disease that is likely to be permanent, which causes a protective occupation participant to retire, accept reduced pay or light duty assignment, or in some cases, that impairs promotional opportunities.

***Amount.*** 80% of salary (75% if partially disabled and not a State Employee), less the following offsets:

- Social Security
- Unemployment Compensation
- Worker's Compensation
- Any other WRS benefit
- All earnings from the employer under which the disability occurred
- A percent of other earnings as follows:
  - ⇒ 1/3 of earnings less than 40% of monthly salary
  - ⇒ 1/2 of earnings between 40% and 80% of monthly salary
  - ⇒ 2/3 of earnings over 80% of monthly salary

### ***Survivor Benefits.***

- Pre-5/3/88 and certain state employees:
  - ⇒ 1/3 of the participants monthly salary at time of death to surviving spouse, plus
  - ⇒ \$15/month to each unmarried child under the age of 18
  - ⇒ Not to exceed 65% of participants monthly salary at time of death
- Post-5/3/88 and certain state employees:
  - ⇒ 1/2 of the participants monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - ⇒ 1/10 of the participants monthly salary at time of death to each unmarried child under the age of 18
  - ⇒ Not to exceed 70% of participants monthly salary at time of death
- Cancer Presumptive Law:
  - ⇒ 70% of the participants monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - ⇒ 1/10 of the participants monthly salary at time of death to the guardian of any minor child, as long as there is no surviving spouse
  - ⇒ There is no maximum



***Increases After Retirement.***

- To age 60: In accordance with WRS salary index.
- After age 60: In accordance with WRS dividend increases (as long as the claimant is not also receiving a disability retirement benefit.)

***Contributions.*** Vary by experience.

## Exhibit 2

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**Mortality:** Wisconsin Projected Experience Table - 93; 98% of male mortality and 97% of female mortality.

**Set Forward:** 3 years for males only; changed from 12 years for males only.

**Recovery:** None.

**Sex:** All disabled recipients are assumed to be male; all beneficiary recipients are assumed to be female.

**Benefit Form:** Life annuity for unmarried disabled recipients and all beneficiaries; 50% joint and survivor annuity for married disabled recipients.

**Interest:** 5% (which approximates an 8% valuation rate with 3% annual benefit increases).

**IBNR Loading:** 10% margin for conservatism

## Exhibit 3

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### Benefits Being Paid and Reported Claim Liability by Year of Incurral

Year Incurred	No.	BENEFITS		Actuarial Liability
		Annual \$	% of Payroll	
1979	1	\$30,084	0.00%	\$428,884
1982	15	458,448	0.05%	5,219,518
1983	16	534,612	0.06%	5,929,787
1984	38	1,256,100	0.14%	14,542,325
1985	49	1,554,024	0.17%	18,782,891
1986	51	1,685,268	0.18%	20,412,272
1987	48	1,433,844	0.16%	17,932,899
1988	62	1,731,048	0.19%	22,283,415
1989	66	1,523,112	0.17%	19,797,223
1990	51	1,103,460	0.12%	15,198,379
1991	54	1,138,872	0.12%	15,463,952
1992	59	1,586,088	0.17%	22,103,988
1993	55	1,417,584	0.16%	20,482,707
1994	34	987,084	0.11%	13,901,319
1995	31	899,160	0.10%	13,182,273
1996	24	727,488	0.08%	10,513,244
1997	31	850,104	0.09%	12,691,520
1998	42	1,141,308	0.12%	16,968,520
1999	23	771,216	0.08%	11,974,942
2000	13	348,372	0.04%	5,349,909
2001	8	186,852	0.02%	2,861,791
<b>Total</b>	<b>771</b>	<b>\$21,364,128</b>	<b>2.34%</b>	<b>\$286,021,758</b>

## Exhibit 4

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### Rate Schedule: Present & Proposed December 31, 2001 Valuation

<b>% of Covered Payroll</b>	<b>Applicable To</b>
1.9%	Groups with claims payout during the prior year of less than or equal to 0.5% of payroll.
2.4	Groups with one claim in which the payout during the prior year exceeded 0.5% of payroll, and groups with two or more claims in which the payout was more than 0.5% but less than 1.0% of payroll.
3.6	Groups with two or more claims in which the payout during the prior year was more than 1.0% but less than 2.0% of payroll.
5.4	Groups with two or more claims in which the payout during the prior year was more than 2.0% and less than 3.0% of payroll.
6.6 + 1/2 of claims over 6.6%*	Groups with two or more claims in which the payout exceeded 3.0% during the prior year.

\* The 50% experience factor is based on claims incurred in the last 4-1/2 years.